NILS

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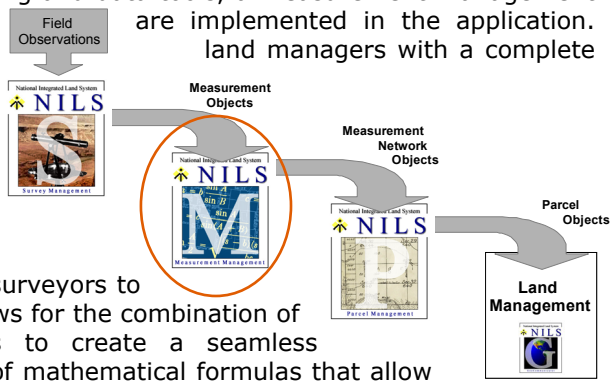
National Integrated Land System

The National Integrated Land System (NILS) is a joint project between the Bureau of Land Management (BLM); USDA Forest Service (USFS); and state, county, and private organizations. NILS will provide a business solution to land managers who face an increasingly complex environment of complicated transactions, legal challenges, and deteriorating and difficult-to-access records.

As part of the NILS solution, the specialized fields of land surveying, land records management, and GIS technology are unified in an enterprise computer application. Field survey mapping and data tools, a measurement management engine to analyze survey data, and parcel management operations are implemented in the application. The integration of surveying, parcel management, and GIS provides land managers with a complete field–to-fabric technology solution.

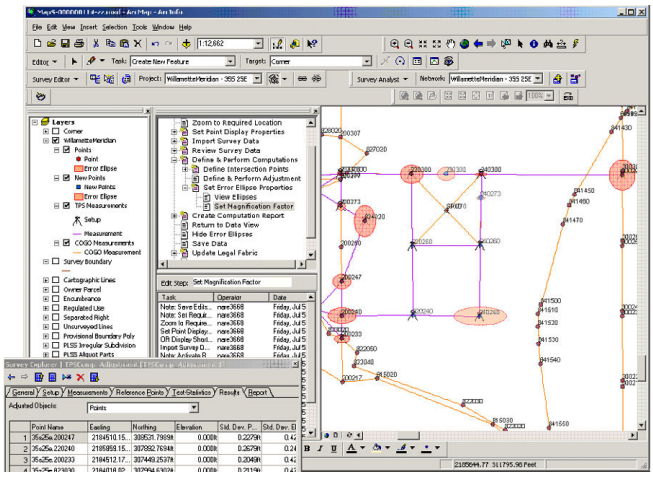


Measurement Management

Measurement Management is a desktop GIS application that allows surveyors to analyze and adjust field survey data. Measurement Management allows for the combination of measurement data from a variety of sources and reliabilities to create a seamless measurement network. Measurement Management contains a suite of mathematical formulas that allow the transformation of raw survey data into the measurement network or the legal description fabric. The legal description fabric can then be used to add the survey-based data to the parcel fabric, which can be used by land managers for decision-making.

Measurement Management contains tools to input and import data, construct measured features, edit measurement data, adjust and analyze the measurement network, perform least square adjustments, perform coordinate geometry and layout, and create the legal description fabric. The initial release of Measurement Management was Sept. 2002.

COGO and Layout – provides surveyors with geodetic coordinate geometry (COGO) calculation methods and procedures. COGO computations include calculations that follow the curvature of the earth when constructing point and line features using direction and distance, proportion, intersection, and offset.



Least Square Adjustment –allows surveyors to view unadjusted data, display polygon misclosures, apply known corrections using direction and distance measurements, adjust the measurement network using a least square adjustment process, and develop and display a statistical analysis of the adjustment.

Edit Measurement Data and Utility Tools –allows surveyors to modify survey-based data and add data from other sources and surveys. It allows for the display of survey-based data in both spatial and tabular format.

Digital Survey Plats – The Measurement Management tools includes a set of map templates for automated production of map products such as survey plats.